CLAIMS

[0087] What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. A method of operating a plurality of reader antennae, the method comprising the steps of:

determining a priority order of the plurality of reader antennae; and

setting a polling sequence for reading the plurality of reader antennae according to the priority order determined in said determining step.

2. The method of claim 1, wherein said determining step further comprising the steps of:

assigning a preference level to each of the plurality of reader antennae; and

deriving a priority order based on the preference levels assigned to each of the plurality of reader antennae.

3. The method of claim 2, wherein said assigning step further comprises assigning a first reader antenna having a higher preference level with a higher priority than at least a second reader antenna having a lower priority.

4. The method of claim 2, further comprising the step of reading the plurality of reader antennae according to the priority order determined in said determining step.

5. The method of claim 4, wherein said reading step comprises reading more frequently a first reader antennae that has a higher preference level compared to a second reader antennae.

6. The method of claim 2, wherein said assigning step comprises randomly assigning a preference level to each of the plurality of reader antennae.

7. The method of claim 2, further comprising the step of inactivating a reader antenna.

8. The method of claim 7, wherein said inactivating step comprises inactivating a reader antenna in response to one of the group of: detecting movement of an identifying tag; proximity of a customer to a reader antenna; proximity of an employee to a reader antenna; and proximity of a product to a reader antenna.

9. The method of claim 1, wherein said determining step comprises assigning the priority order such that the plurality of reader antennae can be read at an equal frequency.

10. The method of claim 2, wherein said assigning step comprises assigning preference levels based on products detected by each of the plurality of reader antennae.

11. The method of claim 10, wherein said assigning step comprises assigning a first reader antenna that detects a larger number of products with a higher preference level than at least a second reader antenna that detects a smaller number of products.

12. The method of claim 10, wherein said assigning step comprises the steps of:

calculating for each of the plurality of reader antennae a probability that a detected product will be moved from a predetermined location; and

assigning a preference level to each of the plurality of reader antennae based on the probability calculated.

13. The method of claim 12, wherein said calculating step comprises detecting movement frequency of the plurality of products from a predetermined location during a predetermined time interval; and calculating the average movement frequency of the plurality of products from the predetermined location during the predetermined time interval.

14. The method of claim 2, wherein said assigning step comprises assigning preference levels according to a preference factor selected from the group consisting of: movement of an identifying tag associated with a reader antenna; proximity of a customer to a reader antenna; proximity of an employee to a reader antenna; and proximity of a product to a reader antenna.

15. The method of claim 2, wherein said assigning step comprises assigning preference levels based on input data from a device selected from the group of: a computer server; a computer workstation; a handheld device; a telephone; and a wireless device.

16. The method of claim 2, wherein said assigning step comprises assigning preference levels based on input data from a sensor.

17. The method of claim 16, wherein said assigning step comprises assigning preference levels based on input data from a sensor selected from the group consisting of: an optical sensor; a vibration sensor; an audio sensor; a pressure sensor; and a pushbutton sensor.

18. A method of adjusting the priority order of a polling sequence for a plurality of RFID antennae, the method comprising the steps of:

providing product support structures, wherein each product support structure is associated with at least one RFID antenna;

placing a plurality of products on at least one of the product support structures, wherein each of the plurality of products is associated with an RFID tag;

identifying the location of each of the plurality of products by detecting the associated RFID tags with the plurality of RFID antennae;

assigning a priority order to the plurality of RFID antennae, wherein the priority order is determined by assigning a preference level to each of the plurality of RFID antennae; and

assigning a polling sequence for reading the plurality of RFID reader antennae according to the priority order.

19. The method of claim 18, wherein said assigning a priority step comprises assigning preference levels based on input data from a sensor.

20. An antenna prioritization system for use in prioritizing the reading of a plurality of reader antennae, the system comprising:

a controller device, wherein said controller device determines a priority order of the plurality of RFID antennae, and sets a polling sequence for reading ones of the plurality of RFID reader antennae according to the priority order; and

a reader, wherein said reader reads ones of the plurality of reader antennae in accordance with the polling sequence.